

WHAT IS CLAIMED IS:

1. A network interface card, comprising:
  - a first printed circuit board;  
first and second connectors coupled with the first printed circuit board;  
a plurality of ethernet communication paths forming at least a portion of a coupling between the first and second connectors;  
the first connector configured to receive a third connector associated with a midplane;  
a chip coupled with the first printed circuit board wherein the plurality of ethernet communications paths couple the first connector with the chip;  
a first communication link coupling the chip and the second connector;  
wherein the chip consolidates data received through the first connector for distribution of the data to the second connector;  
a single board computer coupled with the first printed circuit board; and  
a second communication link coupling the chip with the single board computer.
2. The network interface card of Claim 1, further comprising:
  - a third connector coupled with the first printed circuit board; and  
wherein the plurality of ethernet paths form at least a portion of the coupling between the third connector and the chip.

3. The network interface card of Claim 1, further comprising:

a third connector coupled with the single board computer; and

wherein the third connector is operable to distribute data between the single board computer and a management network.

4. The network interface card of Claim 1, further comprising a third connector forming the coupling between the single board computer and the second communication link.

5. The network interface card of Claim 1, wherein the single board computer comprises:

a second printed circuit board coupled with the first printed circuit board;

a central processing unit coupled with the second printed circuit board; and

memory integrated circuits coupled with the second printed circuit board.

6. The network interface card of Claim 1, wherein the chip includes a repeater chip.

7. The network interface card of Claim 1, wherein the chip includes a switch chip.

8. The network interface card of Claim 2, wherein the third connector includes a gigabit ethernet connector.

9. The network interface card of Claim 2, wherein the third connector includes a gigabit interface connector (GBIC).

10. A network interface card, comprising:  
a first printed circuit board;  
a chip coupled with the first printed circuit board;  
first and second connectors coupled with the first  
printed circuit board, each of the first and second  
connectors adapted to receive a plurality of first  
ethernet communications links, through a midplane  
associated with a plurality of web server processing  
cards;

a plurality of second ethernet communications links  
coupling the first connector and the chip;

a plurality of third ethernet communications links  
coupling the second connector and the chip;

a high density communication path coupling the chip  
with a third connector; and

wherein the chip is operable to distribute data  
communications between one of the first and second  
connectors, and the third connector.

11. The network interface card of Claim 10, wherein  
the chip includes a repeater chip.

12. The network interface card of Claim 10, wherein  
the chip includes a switch chip.

13. The network interface card of Claim 11, wherein  
the repeater chip includes an integrated network hub and  
the repeater chip is operable to aggregate all 10-100-1000  
megabits per second ethernet communications received  
through the first and second connectors.

14. The network interface card of Claim 13, wherein the integrated network hub includes a repeater chip having at least ten ports.

15. The network interface card of Claim 12, wherein the switch chip includes an integrated network switch and the switch chip is operable to aggregate all 10,100/100 megabits per second ethernet communications received through the first and second connectors.

16. The network interface card of Claim 15, wherein the integrated network switch includes a switch chip having at least ten ports.

17. The network interface card of Claim 11, further comprising:

a fourth connector coupled with the first printed circuit board;

a second high density communication path coupling the repeater chip with the fourth connector; and

wherein the second high density communication path and the fourth connector provide at least a portion of a redundant communication path between the chip and a network router.

18. The network interface card of Claim 10, further comprising:

a fourth connector coupled with the first printed circuit board;

a second high density communication path coupling the repeater chip with the fourth connector; and

wherein the fourth connector is operable to receive a fifth connector associated with a second network interface card.

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19. The network interface card of Claim 10, wherein the third connector includes an RJ-21 connector adapted to receive a fourth connector associated with a network router.

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20. The network interface card of Claim 12, wherein the switch chip includes a multiple port 10/100 Base T switch having fiber gigabit uplinks.

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21. The network interface card of Claim 12, wherein the switch chip includes a multiple port 10/100 Base T switch having copper gigabit uplinks.

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22. The network interface card of Claim 12, wherein the switch chip is operable to address and route the messages according to packet headers including port addresses associated with network components.

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23. The network interface card of Claim 10, wherein the first connector includes a built-in serial port.

24. The network interface card of Claim 10, further comprising:

a single board computer coupled with the first printed circuit board; and

5 a second high density communication path coupling the ship with the single board computer.

25. The network interface card of Claim 24, wherein the single board computer comprises:

10 a second printed circuit board coupled with the first printed circuit board;

a central processing unit coupled with the second printed circuit board; and

15 memory integrated circuits coupled with the second printed circuit board.

26. A method for consolidating data communications from a plurality of electronic devices, comprising:

providing a first printed circuit board;

5        coupling first and second connectors with the first printed circuit board;

providing a plurality of ethernet communication paths which form at least a portion of a coupling between the first and second connectors, wherein the first  
10       connector is configured to receive a third connector associated with a midplane;

coupling a chip with the first printed circuit board wherein the plurality of ethernet communication paths couple the first connector with the chip;

15       providing a first communication link which couples the chip and the second connector;

wherein the chip consolidates data received through the first connector for distribution of the data to the second connector;

20       coupling a single board computer with the first printed circuit board;

providing a second communication link coupling the chip with the single board computer; and

25       wherein the single board computer is operable to manage data communications received by the chip.

27. The method of claim 26, further comprising:

coupling a third connector with the first printed circuit board; and

30       wherein the plurality of ethernet paths form at least a portion of the coupling between the third connector and the chip.



28. The method of Claim 26, further comprising:  
coupling a third connector with the single board  
computer; and

5 wherein the third connector is operable to  
distribute data between the single board computer and a  
management network.

29. The method of Claim 27, further comprising  
10 providing a fourth connector which couples the single  
board computer and the first communication link.

30. A method for distributing data communications received from a plurality of web server processing cards, comprising:

providing a first printed circuit board;

5 coupling a chip with the first printed circuit board;

coupling first and second connectors with the printed circuit board, each of the first and second connectors adapted to receive a plurality of first  
10 ethernet communication links, through a midplane associated with a plurality of web server processing cards;

providing a plurality of second ethernet communication links coupling the first connector and the  
15 chip;

providing a plurality of third ethernet communication links coupling the second connector and the  
chip;

providing a high density communication path which  
20 couples the chip and a third connector; and

wherein the chip is operable to distribute data communications between one of the first and second connectors, and the third connector.

31. The method of Claim 30, further comprising:

coupling a fourth connector with the first printed circuit board;

providing a second high density communication path which couples the chip with the third connector; and

wherein the second high density communication path and the fourth connector provide at least a portion of a redundant communication path between the chip and a network router.

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32. The method of Claim 30, further comprising:

coupling a fourth connector with the first printed circuit board;

providing a second high density communication path which couples the chip with the fourth connector; and

wherein the fourth connector is operable to receive a fifth connector associated with a second network interface card.

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33. The method of Claim 30, further comprising:

coupling a single board computer with the first printed circuit board; and

coupling the chip and the single board computer over a high density communication path.

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